Menlo Park Notebook #192 [N-78-12-15.2]

This notebook dates from December 1878. All of the entries are by Edison and relate to work on the electric light. There are notes on carbon, platinum, and other materials; calculations and notes on gas, including comparisons of calculations made by Moses Farmer and Edison; notes and drawings relating to electric power distribution and the need for high resistance lamps; and drawings of lamps and generators. The label on the front cover is marked "short notes - phrases" [crossed out]. The book contains 59 numbered pages.

Blank pages not filmed: 55-59.

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44 Broad St. N.Y.

May, 1890

Notes

Experiments.

Try Fusibility of pumice stone, also of Electro silicon, also oyster shells.

Plaster Paris — 1 pt to 2 ½ H_2O,

Make ~~Hop~~ Lampblack from naphthalin =

Dolomite, has been used by Crooker, for Cylinders in the Oxy Hydrogen flame, it does not Splinter, or Crack like Lime or Magnesia

Frame — Edge

1500 — 540
750 — 270
325 — 135

15
36
90
45
5 45 0

7) 135
18

3/8 — 7

10½ — 6/16
5½ — 12 — 3/4

7) 325
46

3/16 — 21 feet — 20. — 6

63 — 3/4 — 6/8
31½ — 1½
15⅝ — 3
7 . 6

20
1½

3/8 — .10 . 6
5 . 3

3/4

1½ — 2.7 inch

3 — 1.3½

6 — 15½

7 3/4

Wilds Mach

7 horse power horizontal
red hot wire No. 16. 21 feet
long - Surface Calculated to
6 sq ft at 6 x 7 3/4

1 sq ft long 1½ gas jets per hp - with 7 am
(14) 100 cp per inch 3 gas jets per hp

·1 ohm

1000, 6 cells;
4000, 12 "

12 cells,

4 ohms

4

50,-

5

25

1000,

24

5-8,

12 ceffs, each, 333. . 4 ohms, 2 ohms

1 coil ~~60~~. 100 ohms, 4000 ohms

2 - 3 400 = 50, 1000 each.

24 ceffs, — 2 coils each, 4000 dep

40

12 ceffs - 4 ohms.

cold

25 / 25 / 12½ 4 at 25, 4 at 25 each - 6¼ ohms

4 at 100. 25 - 1000 dep

8 " 12

16 6.

1 — 100

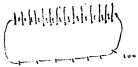
2 — 50

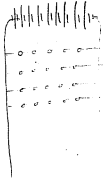
4 — 25,

8 — 12½

16 — 6¼.

100 watts. 100 ohm





1	1000
2	500
4	250
5	125
10	10000
20	5000
40	2500
50	1250

1	10000
2	5000
4	2500
8	1250
16	625
32	312
64	156

40:

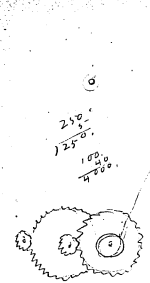
8

300

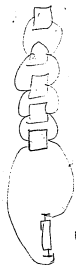
64
53
45
42
35
30
30

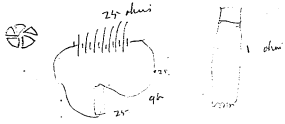
If you have 100 lamps each of
1 ohm resistance & one foot and
each of a resistance of 1
ohm all connected in series
and to a battery which will
keep them incandescent then
you can make 100 lamps of
100 1000 or 10000 ohms resistance
arranging them so the
Combined resistance of the
whole equal, that of the 100
1 ohm lamps in series and the
result would be the same
but for general lighting
the high resistance lamps would be
the best not because it is
more economical but because

It is impracticable to work in series and all lamps given to consumers must be in multiple arc hence at a mile distant from one other lamps would require a conductor having a resistance not over 0.2 of an ohm whereas a 10000 lamp might have at Candela of .1 10 50 or even 100 ohms without materially weakening the current.



1	1000					
2	500					
4	250					
8	125	1/2	31500			
16	62 1/2	1/4	15750			
32	31 1/4	1/8	7875	2048	14 1/2	
64	15 5/8	1/16	3937 1/2	4096	7 1/4	
128	7 3/4	1/32	1968 3/4	8192	3 5/8	
256	3 7/8	1/64	984 3/8	16384	1 13/16	
		1/128	492 3/16	32768	0 29/32	
		1/256	246 1/32	65536	0 29/64	
		1/512	123 1/64			
		1/1024	61 33/64			
			30 65/128			
			15 129/256			
			7 257/512			
			3 513/1024			
			1 1025/2048			
			0 2049/4096			



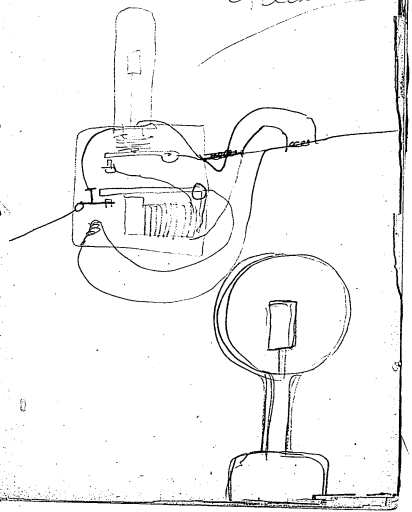


512 1 .95
1024 .95

1	1000		
2	500		
4	250		
8	125		
16	62	$.50	
32	31	.25	
64	15	.62	
128	7	.81	
256	3	1.90	

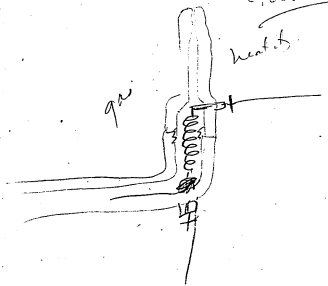
Dec 15 1878

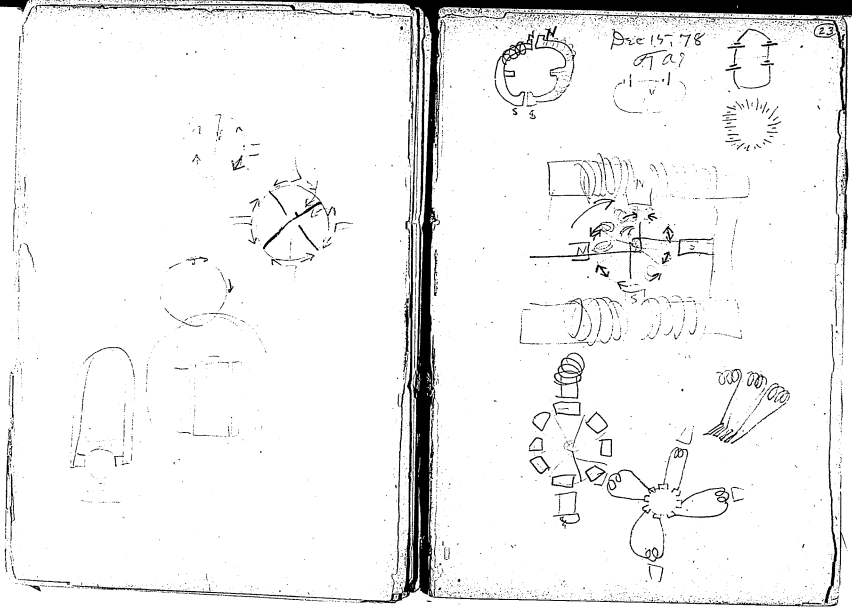
T. A. Edison



Dec 15 1878

T. A. Edison

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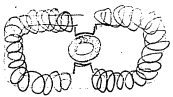

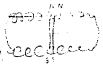

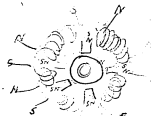

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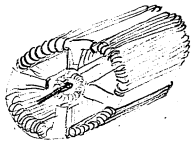
EE 15 18/8
TLE

New magneto.



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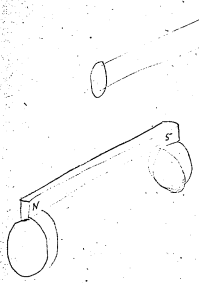
Gas



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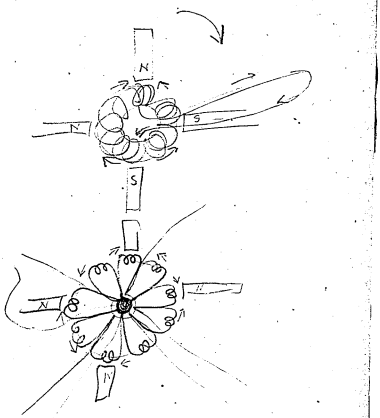
A. Ai



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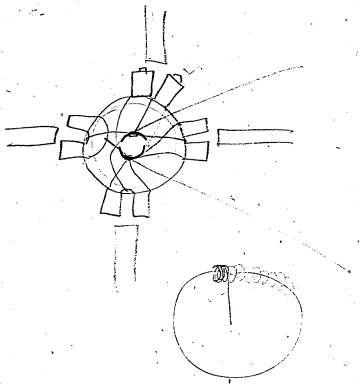
Sat



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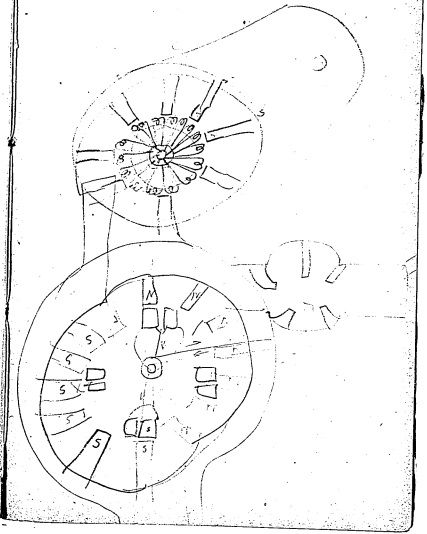

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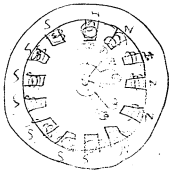

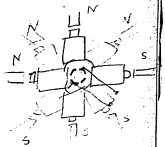

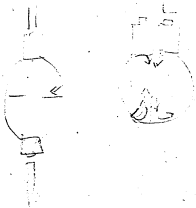

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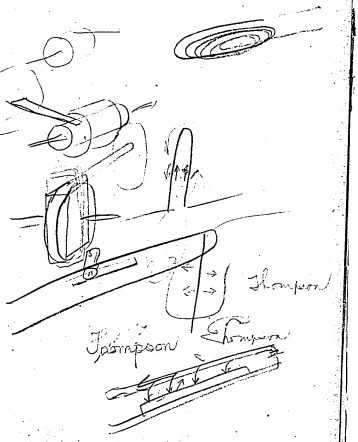
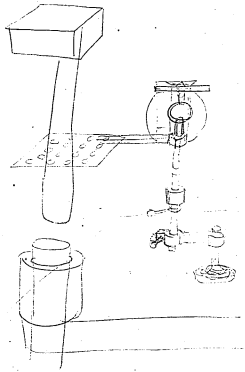
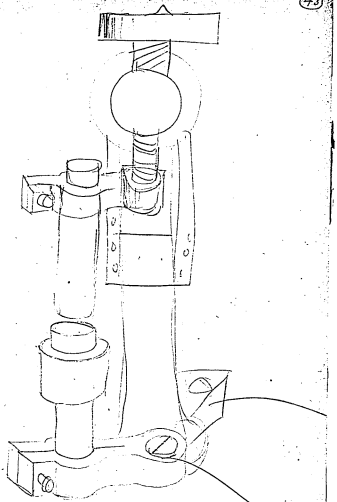
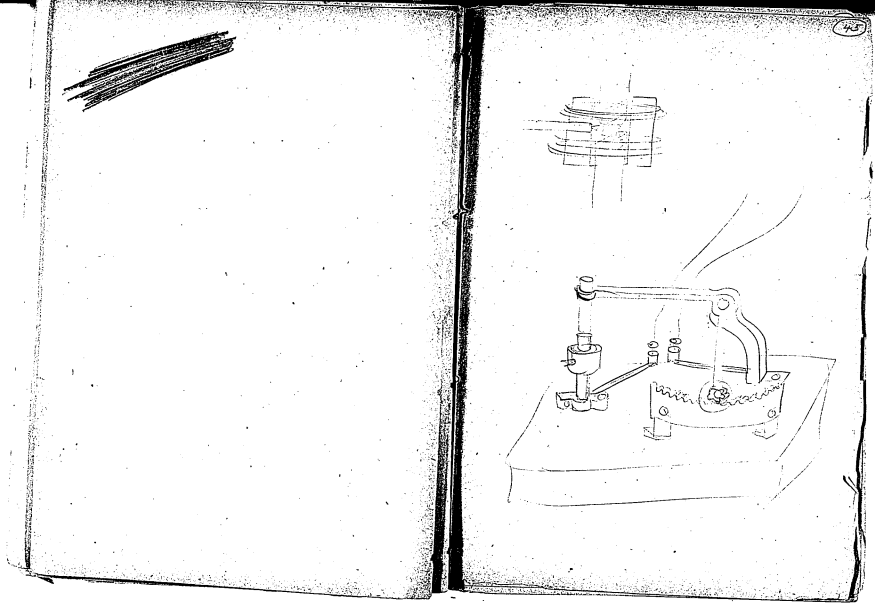
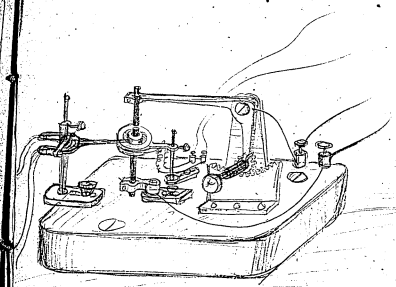
O.A.i











60 of chromium & 40 iron not affected by Aqua Regia - which dissolves Glass -

Platinum found in France - Germany -

Platinum is sometimes alloyed sometimes alloyed with the platinoid metals Palladium Rhodium, Osmium - Iridium Ruthenium, and all. are associated with Gold Selenium Manganese Copper and Silver Tilden, Chemic Diet.

Glass.

when transparent glass is maintained for some time at a high heat, but below fusion, it becomes opaque or translucent fibrous & devitrified, & [illegible] remains unchanged & [illegible] its so much harder steel it scratches glass, will bear sudden changes of temperature

like porcelain, it is
commonly called devitrified
glass or Reaumur's porcelain, but
its proper name is Semidiaphanous crystalline glass.
This change is most readily effected
with bottle or window glass.